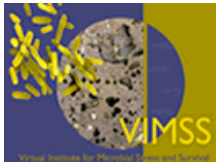


A microscopic image showing numerous yellow, rod-shaped bacteria, likely Bacillus pasteurii, which are used in Microbial Enhanced Oil Recovery (MEOR). The bacteria are scattered across a light-colored, granular surface, possibly a rock or sediment. The background is dark, making the yellow bacteria stand out.

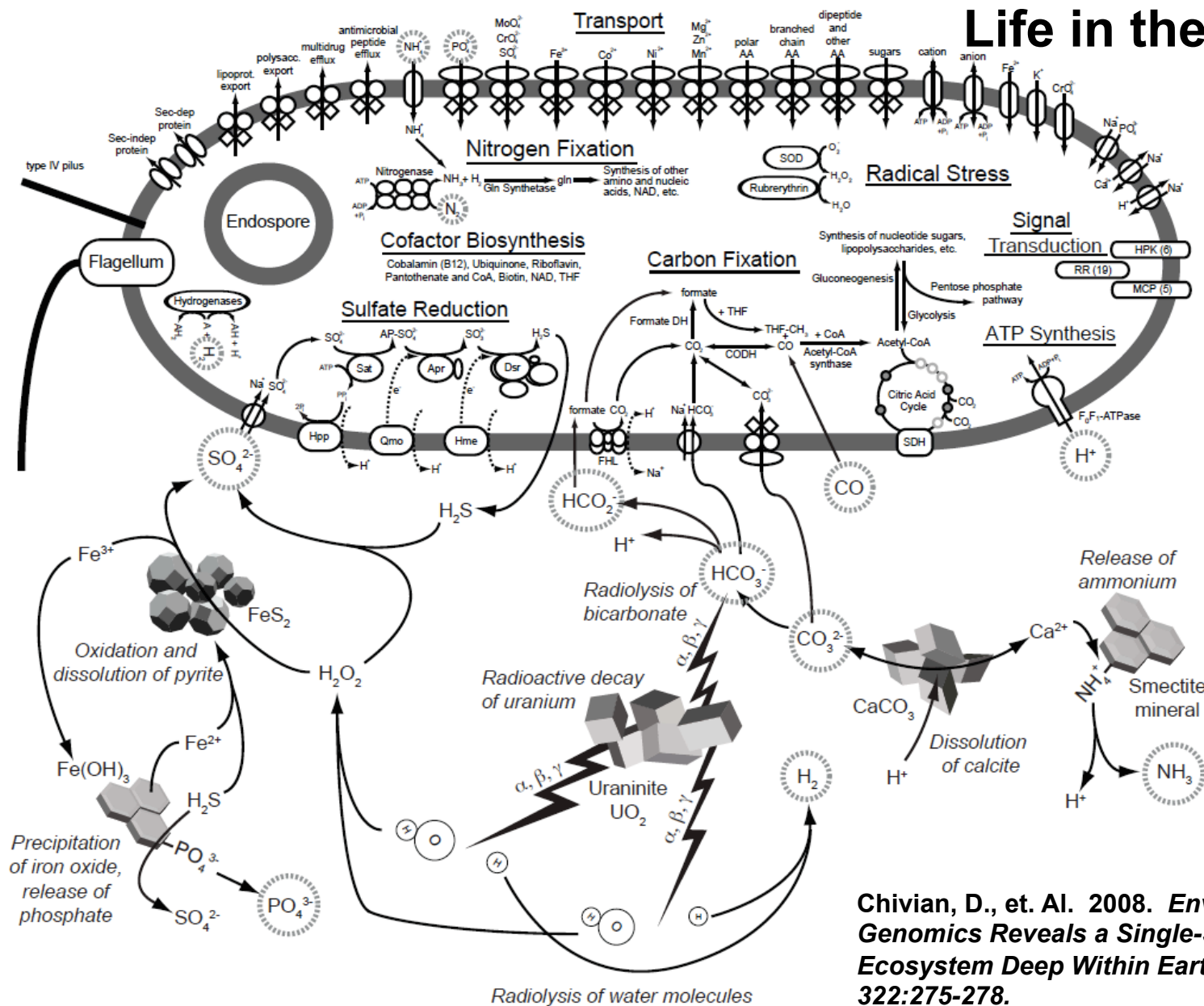
Microbial Enhanced Hydrocarbon and Hydrogen Recovery (MEHHR) and Carbon Capture and Sequestration

- Only 35% of oil in a typical well is recovered
- While 75% of methane is recovered
- A trillion cubic ft of methane can be generated from 1 billion barrels of oil
- Even more hydrogen can be produced from oil

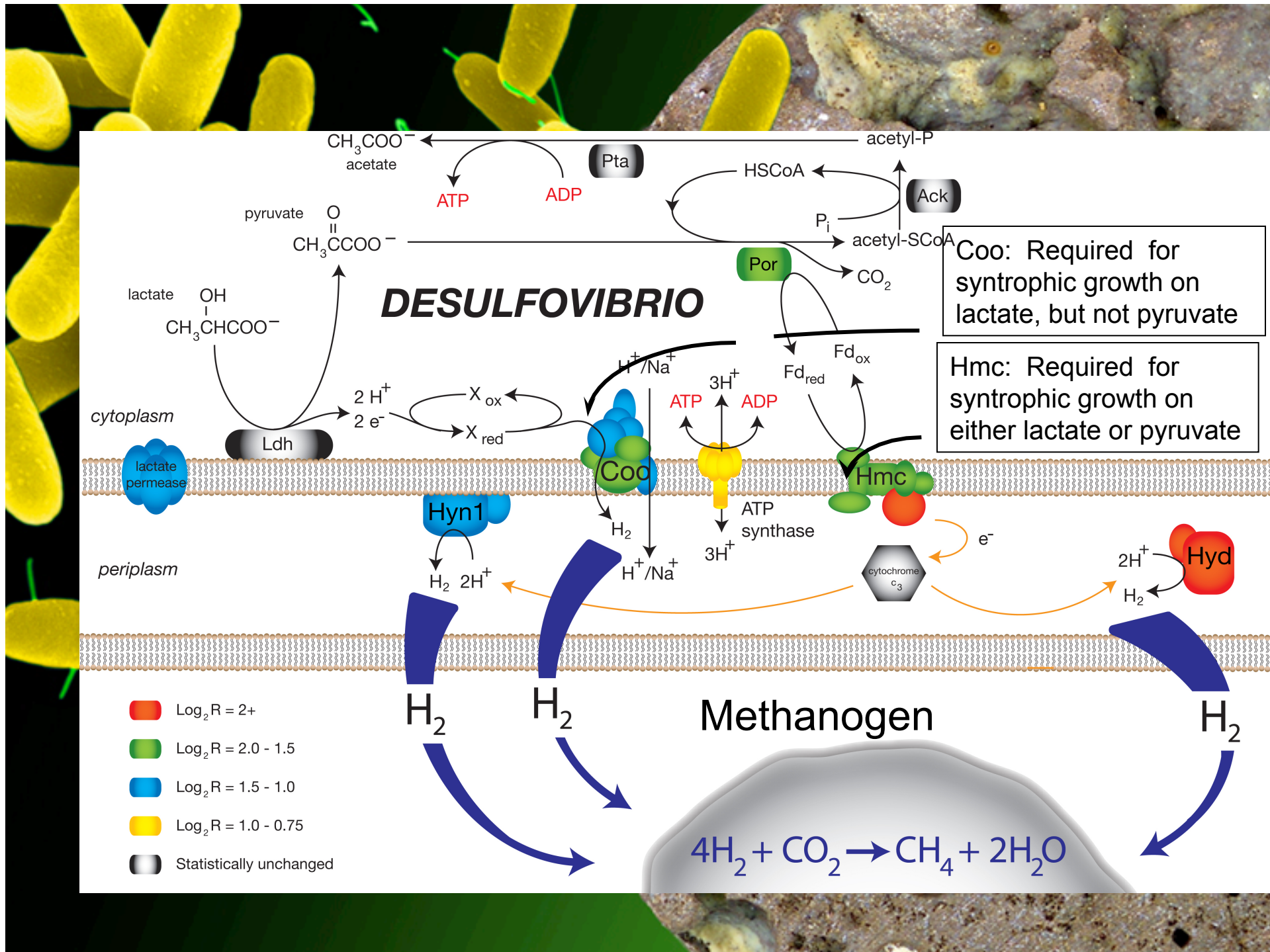


Model of Single Organism Ecosystem

Life in the slow lane

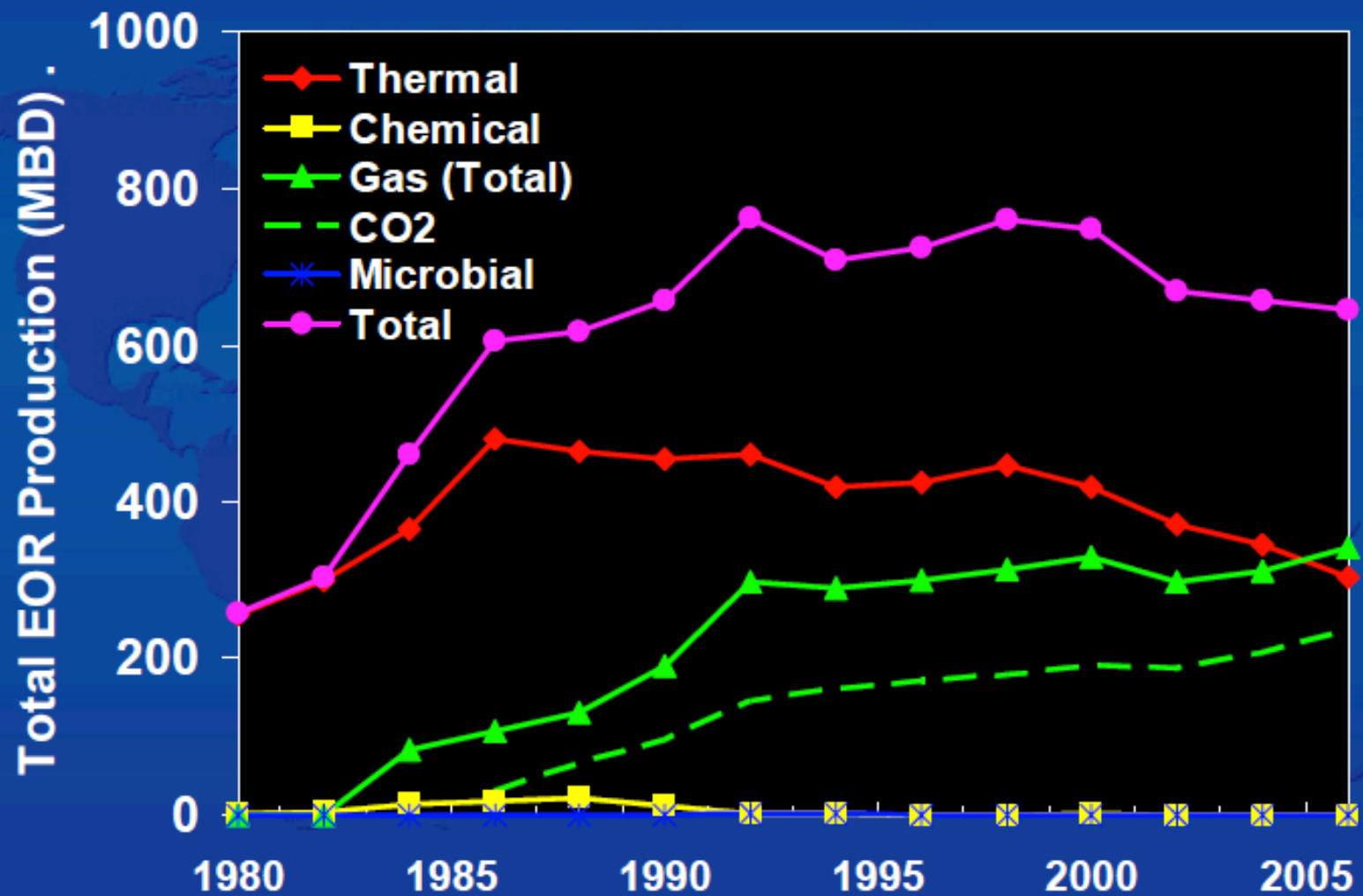


Chivian, D., et. Al. 2008. *Environmental Genomics Reveals a Single-Species Ecosystem Deep Within Earth*. *Science* 322:275-278.



EOR Production Rates in the US

(Data from Oil & Gas Journal, 2006)



Future Research Directions

Transition this activity to the field?

